

Customer No. 24498
Serial No. 10/566,493
Reply to Office Action Dated 11/18/09

Atty. Docket No. PU030229

REMARKS

Claims 1, 3-15, and 17-20 are pending in the Application. Claim 1, 3-15, and 17-20 are rejected by Examiner. Claim 3 has been objected to. No new matter has been added.

Amendments to the Claims

Claim 3 has been amended as suggested by the Examiner to address the Objections raised by the Examiner. Claim 3 now correctly depends from claim 1.

Claim Rejections Pursuant to 35 U.S.C. §102

Claims 1, 4, 6, 7, 9, 11, 13, 15, 18, and 20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Morgan in U.S. Patent Application No. 6,324,006 (Hereinafter Morgan). Applicant respectfully traverses the rejection.

Claims 1, 7, 11 and 15

Morgan fails to disclose each and every element of independent claims 1, 7, 11, and 15. Specifically, Morgan fails to disclose altering the control signal or sequence to decrease the brightness of the primary color immediately before and the primary color immediately after an individual spoke to compensate for the brightness increase caused from using the light during the individual spoke.

As previously stated, the present application deals with using spoke light from individual spokes to boost the brightness of any of the primary colors of the color wheel (color changer) when the brightness level of the primary colors exceeds a threshold level. To compensate for the brightness gained by using spoke light from an individual spoke, the brightness of the primary colors that occur immediately before and after the individual spoke on the color wheel are adjusted. This concept is not disclosed, taught or suggested in Morgan.

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In Morgan the spoke light is used to boost the brightness of white. In order to do this the light multiple spokes must be used so the resulting light is white. Morgan does not disclose, teach or suggest boosting the brightness of any of the primary colors such as Red, Blue, or Green using individual spokes as set forth in the present invention. Indeed, Morgan actually teaches away from using the light from individual spokes to boost the brightness of primary colors and focuses on using all the spokes to boost the brightness of the white component of the image. Applicants respectfully direct the Examiner to the previously cited column 3, lines 26-30 of Morgan where it states:

Prior art systems turn the modulator off during the spoke periods to avoid degrading the color purity of the image produced. This is because the light produced during the spoke periods is multi-colored and cannot be modulated with primary color intensity data without adding an unwanted and improper color component to the image

Applicant also respectfully directs the Examiner to the previously cited column 5, lines 5-7 of Morgan where it states:

...while each individual spoke period cannot be used to produce an image since the spoke period does not contain pure primary colored light, the light generated during all transitions between primary colors creates white light and can contribute to the white component of an image.

However, the Examiner appears to have overlooked these passages and instead has chosen to interpret other passages as disclosing the features disclosed in claims 1, 7, 11, and 15. To this regard, the Examiner suggests that column 7, lines

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25-47, 37-42 46-49, 55-57, and 65-67 discloses using light occurring during at least one first spoke, corresponding to a first interval when the color changer transitions from one primary color to another, when said at least one pixel has a brightness for at least one primary color above a prescribed threshold. However, upon review of these passages, it is apparent they only refer to boosting the brightness for the white component of the image. The cited passages merely clarify that in the absence of a white segment in the color wheel the other primary colors segments of the color wheel (Red, Blue, Green) can be used and the resulting light combined to create white light (which the white light from the combined light of all the spokes can be used to boost). Indeed, even with the use of a white segment and a white segment data the RGB data still contributes to the brightness of the white light (because the combination of Red, Green, and Blue light results in white light) and therefore the RGB data need to be factored into when to use the white light resulting in the use of the combined spoke light. These cited passages do not however, disclose using the light from an individual spoke to boost the brightness for any primary color (RGB).

The Examiner also to be misinterpreting what is disclosed in column 11, lines 16-22 and Table 2 as well as column 12, lines 16-26 of Morgan. The Examiner assert that Morgan does disclose decreasing the brightness before and after the spoke citing col. 11, lines 16-22 and Table 2. However, these sections are only directed to adjusting the white level. Not the brightness of primary colors before or after the spoke to compensate for the added brightness to the primary colors before and after the spoke caused by using the spoke light from the individual spoke. In Column 11, lines 16-22 the brightness for white is reduced to compensate for the brightness added by the combination of light from multiple spokes. In Table 2 the green and blue levels are reduced to correct the hue of white produced by the combination of white light contributed by the White segment of the color wheel (W-white), the white light contribute by the combination of Red, Green, and Blue light (RGB-white) and light from multiple spokes (GW and BR

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spokes). This is not the same as what is set forth in independent claims 1, 7, 11, and 15.

In regards column 12, lines 12-26 the Examiner appears to be ignoring where it discusses the Spoke Hue Trim (SHT) function is used because "as the grayscale codes increase and *a group of spokes* are turned on, in some systems it is difficult get and *exact white color* coordinated match to the proceeding grayscale values."(emphasis added) and gives the following example "For example, if a grayscale, if the grayscale code activates *a group of spokes* but the *white formed by these spokes* has a slight reddish hue to it, one or more LSB are subtracted from the R data bus. "

Thus, the passages cited and relied on by the Examiner actually set forth using groups of spokes to form white light used to boost the brightness of the white component of the image and not using individual spokes to boost the brightness of primary colors (RGB) as set forth in the present invention.

Thus, in view the amendments and above arguments, Applicant respectfully submits that Morgan fails to disclose each and every element of claims 1, 7, 11 and 15. Accordingly, Morgan does not anticipate claims 1, 7, 11, and 15. As such, Applicant respectfully requests the Examiner withdraw the rejection under 35 U.S.C. § 102(b) and pass claims 1, 7, 11 and 15 to allowance.

Claims 4, 6, 9, 13, 18, and 20

Claims 4, 6, 9, 13, 18, and 20 depend from independent claims 1, 7, 11, and 15 and, as such, incorporate each and every element of their respective independent claim. As set forth above, Morgan fails to disclose each and every element of claims 1, 7, 11, and 15 and, as such, also fails to disclose each and every element of claims 4, 6, 9, 13, 18, and 20. Accordingly, Morgan does not anticipate claims 14, 6, 9, 13, 18, and 20. As such, Applicant respectfully requests the Examiner

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withdraw the rejection under 35 U.S.C. § 102(b) and pass claims 4, 6, 9, 13, 18, and 20 to allowance.

Claim Rejections Pursuant to 35 U.S.C. §103

Claims 3, 5, 8, 10, 12, 14, 17, and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Morgan in U.S. Patent Application No. 6,324,006 (Hereinafter Morgan). Applicant respectfully traverses the rejection.

Claims 3, 5, 8, 10, 12, 14, 17, and 19 depend from independent claims 1, 7, 11, and 15 and, as such, incorporate each and every element of their respective independent claim. For much the same reasons as set forth above in discussing the 35 U.S.C. § 102 rejections, Morgan fails to teach, or suggest each and every element of amended independent claims 1, 7, 11, and 15. As such, Morgan also fails to teach or suggest each and every element of claims 3, 5, 8, 10, 12, 14, 17, and 19 which depend from independent claims 1, 7, 11, and 15.

As discussed above, the present application deals with using spoke light from individual spokes to boost the brightness of any of the primary colors of the color wheel (color changer) when the brightness level of the primary colors exceeds a threshold level. To compensate for the brightness gained by using spoke light from an individual spoke, the brightness of the primary colors that occur immediately before and after the individual spoke on the color wheel are adjusted. The claims have been amended to clarify this. This concept is not disclosed, taught or suggested in Morgan.

In Morgan the spoke light is used to boost the brightness of white. In order to do this the light multiple spokes must be used so the resulting light is white. Morgan does not disclose, teach or suggest boosting the brightness of any of the

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primary colors such as Red, Blue, or Green using individual spokes as set forth in the present invention. Indeed, Morgan actually teaches away from using the light from individual spokes to boost the brightness of primary colors. (See column 3, lines 26-30 and column 5, lines 5-7)

Thus, in view the amendments and above arguments, Applicant respectfully submits that Morgan fails to teach or suggest each and every element of amended independent claims 1, 7, 11 and 15 as well as dependent claims 3, 5, 8, 10, 12, 14, 17, and 19 which depend from the independent claims. Accordingly, claims 3, 5, 8, 10, 12, 14, 17, and 19 are patentable over Morgan. As such, Applicant respectfully requests the Examiner withdraw the rejection under 35 U.S.C. § 103(a) and pass claims 3, 5, 8, 10, 12, 14, 17, and 19 to allowance.

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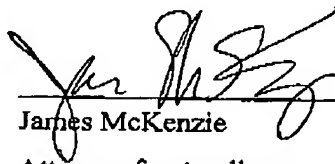
CONCLUSION

Applicant respectfully submits that the amended pending claims patentably define over the cited art and respectfully requests reconsideration and withdrawal of the 35 U.S.C. §102 and 103 rejections of the pending claims. Renewed reconsideration for a Notice of Allowance is respectfully requested.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 07-0832 therefore.

Respectfully submitted,
Donald Henry Willis

Date: May 18, 2010



James McKenzie

Attorney for Applicant

Registration No. 51,146

(609) 734-6866

Thomson Licensing, LLC
Patent Operation
PO Box 5312
Princeton, NJ 08543-5312